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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PU030205		FOR FURTHER ACTION		See Form PCT/PEA/4-16
International application No. PCT/US2004/021622		International filing date (day/month/year) 07.07.2004		Priority date (day/month/year) 21.07.2003
International Patent Classification (IPC) or national classification and IPC H04N5/783, G11B27/00				
Applicant THOMSON LICENSING S.A. et al				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (Indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 11.02.2005		Date of completion of this report 31.10.2005		
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 eprmu d Fax: +49 89 2399 - 4465		Authorized Officer Horstmannshoff, J Telephone No. +49 89 2399-6961		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2004/021622

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-11 as originally filed

Claims, Numbers

1-14 received on 11.02.2005 with letter of 11.02.2005

Drawings, Sheets

1/4-4/4 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2004/021622

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V.

1 The following documents are referred to in this communication:

D1 : EP 1 187 134 A (PIONEER CORP) 13 March 2002 (2002-03-13)

D2 : US 6 512 882 B1 (TEUNISSEN CORNELIS) 28 January 2003 (2003-01-28)

D3 : EP 1 278 191 A (MATSUSHITA ELECTRIC IND CO LTD) 22 January 2003
(2003-01-22)

2 INDEPENDENT CLAIM 1

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not inventive in the sense of Article 33(3) PCT.
The closest prior art document D1 discloses (the references in parenthesis applying to this document):

A method for providing trick mode operations for sub-channels of multiplexed streams stored by a digital storage medium (abstract, paragraphs 1-7 and 52-68, figure 1), comprising the steps of:

- receiving at the recording device, a trick mode command (paragraphs 7, 65-68, 72, 106-107, figure 10, (S11), (S13)) directed to a particular sub-channel of a multiplexed stream,
- receiving identifying frame data stored by the digital storage medium corresponding to the particular sub-channel (paragraphs 110-114, figures 10 and 11, (S17)),
- extracting from the frame data, trick mode data for the particular sub-channel (paragraphs 110-114, figure 10-11)

Hence, independent claim 1 differs from the disclosure of document D1 in that the particular sub-channel of the multiplexed stream, to which the trick mode command is directed, is specified by the trick mode command. The technical effect of this difference is that the sub-channel for trick play is selected.

Hence, the objective problem to be solved by this difference is to provide a method

for specifying the sub-channel of a multiplexed stream to which a trick play command is directed.

Document D1 discloses the recording of multiplexed sub-channels on a storage device and the trick play reproduction of a particular sub-channel (abstract; paragraphs 106-120). Document D1 mentions that the PID of this sub-channel is "determined" (paragraph 107) but does not disclose the detailed method for specifying this particular sub-channel. However, it is implicit that the particular sub-channel for the trick play reproduction must be specified in some way. Hence, it is clear to the skilled person that the sub-channel is an essential parameter for the trick play command. Therefore, the skilled person would search for methods for specifying command parameters to solve the technical objective problem.

The skilled person would then consider the common practice of sending parameters for a command as an operand of the command. Hence, the skilled person would arrive at the solution of independent claim 1 and configure the receiver at the recording device such that it receives a trick mode command specifying the particular sub-channel.

Therefore, skilled person would arrive at the subject-matter of independent claim 1 by combining the teaching of document D1 with common practice without the involvement of an inventive step.

2.2 The opinion expressed in paragraph 2.1 of this written opinion could also be raised based on the disclosure of documents D2 (abstract, column 1 line 37 - column 2 line 2, column 2 lines 20-59, column 3 lines 13-38, column 4 lines 36-52, figure 4) or D3 (abstract, paragraphs 93-119 and 141, figure 1-2).

3 INDEPENDENT CLAIM 9

3.1 Independent Claim 9 repeats the subject-matter of independent Claim 1. Therefore, the opinion given in paragraph 2 is equally valid for independent Claim 9 which is therefore not inventive with respect to document D1. Hence, the present application

does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 9 is not inventive in the sense of Article 33(3) PCT.

4 DEPENDENT CLAIMS 2-8, 10-14

Dependent claims 2-8, 10-14 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT). In particular, it is mentioned:

Claims 1,2:

Document D1 (page 11 lines 27-28) discloses the identification of I-frames.

Claim 2:

Documents D1-D3 disclose the step of outputting the trick mode data.

Claim 4:

Document D1 (paragraph 58) discloses that a user selects a trick mode command.

Claims 5, 11:

Document D3 (figure 1) discloses a storage medium which is IEEE 1394 compliant.

Claims 6, 12:

Documents D1-D3 deal with an MPEG transport stream.

Claims 7-8,13-14:

As discussed in section V-2.1 of this report, it is obvious for the skilled person that a trick mode command comprises the particular sub-channel ID and the trick mode.

CLAIMS:

1. A method for providing trick mode operations for sub-channels of multiplexed streams stored by a digital storage medium, comprising the steps of:

5 receiving at the recording device, a trick mode command specifying a particular sub-channel of a multiplexed stream;

identifying frame data stored by the digital storage medium corresponding to the particular sub-channel; and

extracting, from the frame data, trick mode data for the particular sub-channel.

10

2. The method of claim 1, wherein the frame data comprises complete Intra-coded frames (I-frames) for the particular sub-channel.

3. The method of claim 1, further comprising the step of outputting the
15 trick mode data for the particular sub-channel to a display device for display thereby.

4. The method of claim 1, wherein said receiving step sending step is performed in response to a user selecting the trick mode command via a remote control device.

20

5. The method of claim 1, wherein the digital storage medium is Institute of Electrical & Electronics Engineers 1394 (IEEE-1394) compliant.

6. The method of claim 1, wherein the multiplexed stream is a Moving
25 Picture Experts Group (MPEG) transport stream.

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Empf.zeit:11/02/2005 17:07

Empf.nr.:698 P.013

AMENDED SHEET

11-02-2005

7. The method of claim 1, wherein the particular sub-channel of the multiplexed stream is specified as an operand in the trick mode command.

8. The method of claim 7, wherein at least one of a plurality of trick mode operations to be applied to the particular sub-channel is specified as another operand in the trick mode command.

9. In combination with a digital storage medium coupled to a receiver, a method for providing trick mode operations for sub-channels of multiplexed streams stored on the digital storage medium, comprising the steps of:

receiving, from the receiver, a trick mode command specifying a particular sub-channel of a multiplexed stream; and

15 sending, to the receiver, in response to receiving the trick mode command, frame data corresponding to the particular sub-channel stored by the digital storage medium for extraction of trick mode data there from, the trick mode data corresponding to the particular sub-channel.

10. The method of claim 9, wherein the frame data comprises complete Intra-coded frames (I-frames) for the particular sub-channel.

11. The method of claim 9, wherein the digital storage medium is Institute of Electrical & Electronics Engineers 1394 (IEEE-1394) compliant.

SUBSTITUTE SHEET

Empf.zeit: 11/02/2005 17:07

Empf.nr.: 698 P.014

AMENDED SHEET

11-02-2005

12. The method of claim 9, wherein the multiplexed stream is a Moving Picture Experts Group (MPEG) transport stream.

13. The method of claim 9, wherein the particular sub-channel of the
S multiplexed stream is specified as an operand in the trick mode command.

14. The method of claim 13, wherein at least one of a plurality of trick mode operations to be applied to the particular sub-channel is specified as another operand in the trick mode command.

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Empf.zeit:11/02/2005 17:07

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11-02-2005